ABSTRACT OF THE DISCLOSURE

[0047]   A flat panel display system for an aircraft display includes a graphics rendering computer for rendering of anti-aliased graphical imaging data derived from aircraft sensors for full-field imaging on a cockpit display screen. A comparator processor independently generates, from the same sensor data, a selected subset or "points of light" of the display screen image and compares the points of light data to the data generated by the rendering computer for the same display screen pixel locations. The minimized processing requirements and simplified design of the comparator processor enable ready FAA certification of the comparator processor, whereas the extreme complexity and processing operations required of the rendering computer make FAA certification thereof unusually time consuming and expensive. The comparator processor checks a meaningful subset of the imaging data generated by the rendering computer for each display refresh scan and thereby obviates the need for the otherwise-required level of rendering computer certification that is impractical or unavailable. The rendering computer may be implemented by commercial single-board personal computer hardware with a replaceable graphics processor to enable ease of use of improved components.